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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,199	09/22/2006	**Sandeep Dalal**	US040162	1869

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
HOLDER, ANNER N	

ART UNIT	PAPER NUMBER
2483	

NOTIFICATION DATE	DELIVERY MODE
03/24/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/599,199	DALAL ET AL.	
	Examiner	Art Unit	
	ANNER HOLDER	2483	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: the specification lacks identification labels as set forth below:

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Appropriate correction is required.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because drawings submitted 09/22/06 do not contain any form of labels for presented blocks. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4, 6-8, 10-12, 14-16, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi US 6,441,813 in view of Boroczky et al. US 2002/0131512.

7. As to claim 1, Ishibashi teaches a method of processing a digital video signal, [abstract; fig. 1; figs. 5-7; col. 1 lines 9-14] comprising: decoding (210) [abstract; fig. 1(112); col. 5 lines 45-53] an encoded digital video signal to produce a decoded digital video signal having a progressive scan format at a frame rate of approximately 24 frames/second; [col. 5 line 66- col. 6 line 2; col. 6 lines 3-64; col. 12 lines 1-33] decoded digital video signal having the progressive scan format at the frame rate of approximately 24 frames/second using the calculated video encoding metric, to produce a processed decoded digital video signal having the progressive scan format at the frame rate of approximately 24 frames/second; [col. 6 lines 3-64; col. 11 line 66 - col. 12 line 33] and converting (240) the processed decoded digital video signal from the progressive scan format at the frame rate of approximately 24 frames/second format to an interlaced format at one of approximately 50 fields/second or approximately 60 fields/second. [abstract; col. 6 lines 3-64; col. 7 lines 12-35; col. 12 lines 31-33; col. 11 lines 31-64; fig. 6]

Ishibashi does not explicitly teach calculating (220) at least one video encoding metric from the encoded digital video signal; executing a video quality improvement algorithm (230) on the decoded digital video signal.

Boroczky teaches calculating (220) at least one video encoding metric from the encoded digital video signal; [¶ 0030-0031; ¶ 0035] executing a video quality improvement algorithm (230) on the decoded digital video signal. [¶ 0030-0031; ¶ 0035; ¶ 0039; ¶0042-0045]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the metric teachings of Boroczky with the device of Ishibashi allowing for improved image quality. [Boroczky - ¶ 0014]

8. As to claim 2, Ishibashi (modified by Boroczky) teaches wherein calculating (220) at least one video encoding metric includes calculating a Unified Metric For Digital Video Processing (UMDVP) value. [Boroczky - ¶ 0030-0031; ¶ 0035; ¶ 0039]

9. As to claim 3, Ishibashi (modified by Boroczky) teaches wherein the video encoding metric is calculated using at least one of a quantization parameter or a number of bits employed to code a luminance block of the coded digital video signal. [Boroczky - ¶0042-0045]

10. As to claim 4, Ishibashi (modified by Boroczky) teaches wherein converting (240) the processed decoded video signal from the progressive scan format at the frame rate of approximately 24 frames/second format to an interlaced format at approximately 60 fields/second comprises executing a 3:2 pulldown algorithm. [Ishibashi - col. 12 lines 31-33]

11. As to claim 6, Ishibashi teaches a method of processing a digital video signal for display on a display device, [abstract; fig. 1; figs. 5-7; col. 1 lines 9-14] comprising: decoding (210) [abstract; fig. 1(112); col. 5 lines 45-53] an encoded digital video signal

to produce a decoded digital video signal having a video source format; [col. 5 line 66-col. 6 line 2; col. 6 lines 3-64; col. 12 lines 1-33] and converting (240) the processed decoded digital video signal from the video source format to a video display format suitable for display on the display device. [abstract; col. 6 lines 3-64; col. 7 lines 12-35; col. 12 lines 31-33; col. 11 lines 31-64; fig. 6]

Ishibashi does not explicitly teach calculating (220) at least one video encoding metric from the encoded digital video signal; executing a video quality improvement algorithm (230) on the decoded digital video signal having the video source format using the calculated video encoding metric, to produce a processed decoded digital video signal having the video source format.

Boroczky teaches calculating (220) at least one video encoding metric from the encoded digital video signal; [¶ 0030-0031; ¶ 0035] executing a video quality improvement algorithm (230) on the decoded digital video signal having the video source format using the calculated video encoding metric, to produce a processed decoded digital video signal having the video source format. [¶ 0030-0031; ¶ 0035; ¶ 0039; ¶0042-0045]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the metric teachings of Boroczky with the device of Ishibashi allowing for improved image quality. [Boroczky - ¶ 0014]

12. As to claim 7, Ishibashi (modified by Boroczky) teaches where the video source format is progressive scanned at approximately 24 frames/second. [Ishibashi - col. 12 lines 31-33]

13. As to claim 8, Ishibashi (modified by Boroczky) teaches where the video display format is interlaced at approximately 60 fields/second. [Ishibashi - col. 12 lines 31-33]

14. As to claim 10, Ishibashi (modified by Boroczky) teaches wherein calculating (220) at least one video encoding metric includes calculating a Unified Metric For Digital Video Processing (UMDVP) value. [Boroczky - ¶ 0030-0031; ¶ 0035; ¶ 0039]

15. As to claim 11, Ishibashi (modified by Boroczky) teaches wherein the video encoding metric is calculated using at least one of a quantization parameter or a number of bits employed to code a luminance block of the coded digital video signal. [Boroczky - ¶0042-0045]

16. As to claim 12, Ishibashi (modified by Boroczky) teaches wherein converting (240) the processed decoded video signal from the video source format to the video display format comprises executing a 3:2 pulldown algorithm. [Ishibashi - col. 12 lines 31-33]

17. As to claim 14, Ishibashi teaches a system for processing a digital video signal for display on a display device, [abstract; fig. 1; figs. 5-7; col. 1 lines 9-14] comprising: a decoder (210) [abstract; fig. 1(112); col. 5 lines 45-53] for decoding an encoded digital video signal to produce a decoded digital video signal at a source frame rate; [col. 5 line 66- col. 6 line 2; col. 6 lines 3-64; col. 12 lines 1-33] and a format converter (240) for converting the processed decoded video signal from the source frame rate to a display frame rate suitable for display on the display device. [abstract; col. 6 lines 3-64; col. 7 lines 12-35; col. 12 lines 31-33; col. 11 lines 31-64; fig. 6]

Ishibashi does not explicitly teach a video encoding metric calculation module (220) for calculating a video encoding metric from the encoded digital video signal; a post-processor (230) for executing a video quality improvement algorithm on the decoded digital video signal at the source frame rate using the calculated video encoding metric to produce a processed decoded digital video signal.

Boroczky teaches a video encoding metric calculation module (220) for calculating a video encoding metric from the encoded digital video signal; [¶ 0030-0031; ¶ 0035] a post-processor (230) for executing a video quality improvement algorithm on the decoded digital video signal at the source frame rate using the calculated video encoding metric to produce a processed decoded digital video signal. [¶ 0030-0031; ¶ 0035; ¶ 0039; ¶0042-0045]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the metric teachings of Boroczky with the device of Ishibashi allowing for improved image quality. [Boroczky - ¶ 0014]

18. As to claim 15, Ishibashi (modified by Boroczky) teaches where the video source format is progressive scanned at approximately 24 frames/second. [Ishibashi - col. 12 lines 31-33]

19. As to claim 16, Ishibashi (modified by Boroczky) teaches where the video display format is interlaced at one of approximately 50 fields/second or approximately 60 fields/second. [Ishibashi - col. 12 lines 31-33]

20. As to claim 17, Ishibashi (modified by Boroczky) teaches wherein video encoding metric calculation module (220) calculates a Unified Metric For Digital Video Processing (UMDVP) value. [Boroczky - ¶ 0030-0031; ¶ 0035; ¶ 0039]

21. As to claim 18, Ishibashi (modified by Boroczky) teaches wherein the extracted coding information includes at least one of a quantization parameter or a number of bits employed to code a luminance block of the coded digital video signal. [Boroczky - ¶0042-0045]

22. As to claim 19, Ishibashi (modified by Boroczky) teaches wherein the format converter (240) executes a 3:2 pulldown algorithm. [Ishibashi - col. 12 lines 31-33]

23. Claims 5, 9, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi US 6,441,813 in view of Boroczky et al. US 2002/0131512 further in view of Adams et al. US 6,867,814.

24. As to claim 5, Ishibashi (modified by Boroczky) teaches the method of claim 1.

Ishibashi (modified by Boroczky) does not explicitly teach wherein converting (240) the processed decoded video signal from the progressive scan format at the frame rate of approximately 24 frames/second format to an interlaced format at approximately 50 fields/second comprises executing a 2:2 pulldown algorithm.

Adams teaches wherein converting (240) the processed decoded video signal from the progressive scan format at the frame rate of approximately 24 frames/second format to an interlaced format at approximately 50 fields/second comprises executing a 2:2 pulldown algorithm. [fig. 2; col. 1 lines 37-58]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 2:2 pulldown teachings of Adams with the device of Ishibashi (modified by Boroczky) allowing for improved image quality of displayed images.

25. As to claim 9, Ishibashi (modified by Boroczky) teaches the limitations of claim 6.

Ishibashi (modified by Boroczky) does not explicitly teach where the video display format is interlaced at approximately 50 fields/second.

Adams teaches where the video display format is interlaced at approximately 50 fields/second. [fig. 2; col. 1 lines 37-58]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 2:2 pulldown teachings of Adams with the device of Ishibashi (modified by Boroczky) allowing for improved image quality of displayed images.

26. As to claim 13, Ishibashi (modified by Boroczky) teaches the method of claim 6,.

Ishibashi (modified by Boroczky) does not explicitly teach wherein converting (240) the processed decoded video signal from the video source format to the video display format comprises executing a 2:2 pulldown algorithm.

Adams teaches wherein converting (240) the processed decoded video signal from the video source format to the video display format comprises executing a 2:2 pulldown algorithm. [fig. 2; col. 1 lines 37-58]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 2:2 pulldown teachings of Adams with the device of Ishibashi (modified by Boroczky) allowing for improved image quality of displayed images.

27. As to claim 20, Ishibashi (modified by Boroczky) teaches the system of claim 14.

Ishibashi (modified by Boroczky) does not explicitly teach a 2:2 pulldown algorithm.

Adams teaches a 2:2 pulldown algorithm. [fig. 2; col. 1 lines 37-58]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 2:2 pulldown teachings of Adams with the device of Ishibashi (modified by Boroczky) allowing for improved image quality of displayed images.

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNER HOLDER whose telephone number is (571)270-1549. The examiner can normally be reached on M-W, M-W 8 am-3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Ustaris can be reached on 571-272-7383. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anner Holder/
Examiner, Art Unit 2483